RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/578,387_
Source: _IFWP_
Date Processed by STIC: _5/15/06_

ENTERED

IFWP

RAW SEQUENCE LISTING   DATE: 05/15/2006
PATENT APPLICATION: US/10/578,387   TIME: 09:45:59

        Input Set : A:\seqlst.txt
        Output Set: N:\CRF4\05152006\J578387.raw

```
   4 <110> APPLICANT: Long, Li
   5        Luqman, Mohammad
   6        Yabannavar, Asha
   7        Zaror, Isabel
   9 <120> TITLE OF INVENTION: Use of Antagonist Anti-CD40 Monoclonal
  10        Antibodies for Treatment of Multiple Myeloma
  13 <130> FILE REFERENCE: PP22589.002 (282915)
C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/578,387
C--> 15 <141> CURRENT FILING DATE: 2006-05-02
  15 <150> PRIOR APPLICATION NUMBER: 60/565,709
  16 <151> PRIOR FILING DATE: 2004-04-26
  18 <150> PRIOR APPLICATION NUMBER: 60/565,710
  19 <151> PRIOR FILING DATE: 2004-04-27
  21 <150> PRIOR APPLICATION NUMBER: 60/525,579
  22 <151> PRIOR FILING DATE: 2003-11-26
  24 <150> PRIOR APPLICATION NUMBER: 60/517,337
  25 <151> PRIOR FILING DATE: 2003-11-04
  27 <160> NUMBER OF SEQ ID NOS: 12
  29 <170> SOFTWARE: FastSEQ for Windows Version 4.0
  31 <210> SEQ ID NO: 1
  32 <211> LENGTH: 720
  33 <212> TYPE: DNA
  34 <213> ORGANISM: Artificial Sequence
  36 <220> FEATURE:
  37 <223> OTHER INFORMATION: Coding sequence for light chain of 12.12 human
  38        anti-CD40 antibody
W--> 40 <221> NAME/KEY: CDS
  41 <222> LOCATION: (1)...(720)
W--> 43 <400> 1
  44 atg gcg ctc cct gct cag ctc ctg ggg ctg cta atg ctc tgg gtc tct    48
  45 Met Ala Leu Pro Ala Gln Leu Leu Gly Leu Leu Met Leu Trp Val Ser
  46  1               5                   10                  15
  48 gga tcc agt ggg gat att gtg atg act cag tct cca ctc tcc ctg acc    96
  49 Gly Ser Ser Gly Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Thr
  50              20                  25                  30
  52 gtc acc cct gga gag ccg gcc tcc atc tcc tgc agg tcc agt cag agc   144
  53 Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser
  54          35                  40                  45
  56 ctc ctg tat agt aat gga tac aac tat ttg gat tgg tac ctg cag aag   192
  57 Leu Leu Tyr Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys
  58          50                  55                  60
  60 cca ggg cag tct cca cag gtc ctg atc tct ttg ggt tct aat cgg gcc   240
  61 Pro Gly Gln Ser Pro Gln Val Leu Ile Ser Leu Gly Ser Asn Arg Ala
```

```
62  65                      70                  75                      80
64  tcc ggg gtc cct gac agg ttc agt ggc agt gga tca ggc aca gat ttt    288
65  Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
66                      85                  90                  95
68  aca ctg aaa atc agc aga gtg gag gct gag gat gtt ggg gtt tat tac    336
69  Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr
70                      100                 105                 110
72  tgc atg caa gct cga caa act cca ttc act ttc ggc cct ggg acc aaa    384
73  Cys Met Gln Ala Arg Gln Thr Pro Phe Thr Phe Gly Pro Gly Thr Lys
74                      115                 120                 125
76  gtg gat atc aga cga act gtg gct gca cca tct gtc ttc atc ttc ccg    432
77  Val Asp Ile Arg Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro
78      130                 135                 140
80  cca tct gat gag cag ttg aaa tct gga act gcc tct gtt gtg tgc ctg    480
81  Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu
82  145                 150                 155                 160
84  ctg aat aac ttc tat ccc aga gag gcc aaa gta cag tgg aag gtg gat    528
85  Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp
86                      165                 170                 175
88  aac gcc ctc caa tcg ggt aac tcc cag gag agt gtc aca gag cag gac    576
89  Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp
90                      180                 185                 190
92  agc aag gac agc acc tac agc ctc agc agc acc ctg acg ctg agc aaa    624
93  Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys
94          195                 200                 205
96  gca gac tac gag aaa cac aaa gtc tac gcc tgc gaa gtc acc cat cag    672
97  Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln
98      210                 215                 220
100 ggc ctg agc tcg ccc gtc aca aag agc ttc aac agg gga gag tgt tag    720
101 Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys  *
102 225                 230                 235
106 <210> SEQ ID NO: 2
107 <211> LENGTH: 239
108 <212> TYPE: PRT
109 <213> ORGANISM: Artificial Sequence
111 <220> FEATURE:
112 <223> OTHER INFORMATION: Light chain of 12.12 human anti-CD40 antibody
114 <400> SEQUENCE: 2
115 Met Ala Leu Pro Ala Gln Leu Leu Gly Leu Leu Met Leu Trp Val Ser
116 1                   5                   10                  15
117 Gly Ser Ser Gly Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Thr
118                 20                  25                  30
119 Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser
120         35                  40                  45
121 Leu Leu Tyr Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys
122     50                  55                  60
123 Pro Gly Gln Ser Pro Gln Val Leu Ile Ser Leu Gly Ser Asn Arg Ala
124 65                  70                  75                  80
125 Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
```

RAW SEQUENCE LISTING   DATE: 05/15/2006
PATENT APPLICATION: US/10/578,387   TIME: 09:45:59

Input Set : **A:\seqlst.txt**
Output Set: **N:\CRF4\05152006\J578387.raw**

```
126                 85              90              95
127 Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr
128                 100             105             110
129 Cys Met Gln Ala Arg Gln Thr Pro Phe Thr Phe Gly Pro Gly Thr Lys
130         115             120             125
131 Val Asp Ile Arg Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro
132     130             135             140
133 Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu
134 145             150             155             160
135 Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp
136                 165             170             175
137 Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp
138             180             185             190
139 Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys
140         195             200             205
141 Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln
142     210             215             220
143 Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
144 225             230             235
147 <210> SEQ ID NO: 3
148 <211> LENGTH: 2016
149 <212> TYPE: DNA
150 <213> ORGANISM: Artificial Sequence
152 <220> FEATURE:
153 <223> OTHER INFORMATION: Coding sequence for heavy chain of 12.12 human
154       anti-CD40 antibody (with introns)
156 <400> SEQUENCE: 3
157 atggagtttg ggctgagctg ggttttcctt gttgctattt taagaggtgt ccagtgtcag 60
158 gtgcagttgg tggagtctgg gggaggcgtg gtccagcctg ggaggtccct gagactctcc 120
159 tgtgcagcct ctggattcac cttcagtagc tatggcatgc actgggtccg ccaggctcca 180
160 ggcaagggggc tggagtgggt ggcagttata tcatatgagg aaagtaatag ataccatgca 240
161 gactccgtga agggccgatt caccatctcc agagacaatt ccaagatcac gctgtatctg 300
162 caaatgaaca gcctcagaac tgaggacacg gctgtgtatt actgtgcgag agatgggggt 360
163 atagcagcac ctgggcctga ctactggggc cagggaaccc tggtcaccgt ctcctcagca 420
164 agtaccaagg gcccatccgt cttccccctg gcgcccgcta gcaagagcac ctctggggggc 480
165 acagcggccc tgggctgcct ggtcaaggac tacttccccg aaccggtgac ggtgtcgtgg 540
166 aactcaggcg ccctgaccag cggcgtgcac accttcccgg ctgtcctaca gtcctcagga 600
167 ctctactccc tcagcagcgt ggtgaccgtg ccctccagca gcttgggcac ccagacctac 660
168 atctgcaacg tgaatcacaa gcccagcaac accaaggtgg acaagagagt tggtgagagg 720
169 ccagcacagg gagggagggt gtctgctgga gccaggctc agcgctcctg cctggacgca 780
170 tcccggctat gcagtcccag tccagggcag caggcaggc ccgtctgcc tcttcacccg 840
171 gaggcctctg cccgccccac tcatgctcag ggagagggtc ttctggcttt ttccccaggc 900
172 tctgggcagg cacaggctag gtgcccctaa cccaggccct gcacacaaag gggcaggtgc 960
173 tgggctcaga cctgccaaga gccatatccg ggaggaccct gccctgacc taagcccacc 1020
174 ccaaaggcca aactctccac tccctcagct cggacacctt ctctcctccc agattccagt 1080
175 aactcccaat cttctctctg cagagcccaa atcttgtgac aaaactcaca catgcccacc 1140
176 gtgcccaggt aagccagccc aggcctcgcc ctccagctca aggcgggaca ggtgccctag 1200
177 agtagcctgc atccagggac aggccccagc cgggtgctga cacgtccacc tccatctctt 1260
178 cctcagcacc tgaactcctg ggggggaccgt cagtcttcct cttcccccca aaacccaagg 1320
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/578,387

DATE: 05/15/2006
TIME: 09:45:59

Input Set : **A:\seqlst.txt**
Output Set: **N:\CRF4\05152006\J578387.raw**

```
179 acaccctcat gatctcccgg acccctgagg tcacatgcgt ggtggtggac gtgagccacg 1380
180 aagaccctga ggtcaagttc aactggtacg tggacggcgt ggaggtgcat aatgccaaga 1440
181 caaagccgcg ggaggagcag tacaacagca cgtaccgtgt ggtcagcgtc ctcaccgtcc 1500
182 tgcaccagga ctggctgaat ggcaaggagt acaagtgcaa ggtctccaac aaagccctcc 1560
183 cagcccccat cgagaaaacc atctccaaag ccaaaggtgg gacccgtggg gtgcgagggc 1620
184 cacatggaca gaggccggct cggcccaccc tctgccctga gagtgaccgc tgtaccaacc 1680
185 tctgtcccta cagggcagcc ccgagaacca caggtgtaca ccctgccccc atcccgggag 1740
186 gagatgacca agaaccaggt cagcctgacc tgcctggtca aaggcttcta tcccagcgac 1800
187 atcgccgtgg agtgggagag caatgggcag ccggagaaca actacaagac cacgcctccc 1860
188 gtgctggact ccgacggctc cttcttcctc tatagcaagc tcaccgtgga caagagcagg 1920
189 tggcagcagg ggaacgtctt ctcatgctcc gtgatgcatg aggctctgca caaccactac 1980
190 acgcagaaga gcctctccct gtctccgggt aaatga                          2016
192 <210> SEQ ID NO: 4
193 <211> LENGTH: 469
194 <212> TYPE: PRT
195 <213> ORGANISM: Artificial Sequence
197 <220> FEATURE:
198 <223> OTHER INFORMATION: Heavy chain of 12.12 human anti-CD40 antibody
200 <400> SEQUENCE: 4
201 Met Glu Phe Gly Leu Ser Trp Val Phe Leu Val Ala Ile Leu Arg Gly
202   1               5                  10                  15
203 Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
204              20                  25                  30
205 Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
206          35                  40                  45
207 Ser Ser Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
208      50                  55                  60
209 Glu Trp Val Ala Val Ile Ser Tyr Glu Glu Ser Asn Arg Tyr His Ala
210 65                  70                  75                  80
211 Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Ile
212              85                  90                  95
213 Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr Ala Val
214             100                 105                 110
215 Tyr Tyr Cys Ala Arg Asp Gly Gly Ile Ala Ala Pro Gly Pro Asp Tyr
216             115                 120                 125
217 Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
218     130                 135                 140
219 Pro Ser Val Phe Pro Leu Ala Pro Ala Ser Lys Ser Thr Ser Gly Gly
220 145                 150                 155                 160
221 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
222             165                 170                 175
223 Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
224             180                 185                 190
225 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
226             195                 200                 205
227 Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val
228     210                 215                 220
229 Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys
230 225                 230                 235                 240
```

RAW SEQUENCE LISTING   DATE: 05/15/2006
PATENT APPLICATION: US/10/578,387   TIME: 09:45:59

Input Set : A:\seqlst.txt
Output Set: N:\CRF4\05152006\J578387.raw

231 Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
232   245   250   255
233 Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
234   260   265   270
235 Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
236   275   .   280   285
237 Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
238   290   295   300
239 Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
240 305   310   315   320
241 Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
242   325   330   335
243 Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
244   340   345   350
245 Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
246   355   360   365
247 Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln
248   370   375   380
249 Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
250 385   .   390   395   400
251 Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
252   405   410   415
253 Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
254   420   425   430
255 Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
256   435   440   445
257 Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
258   450   455   460
259 Leu Ser Pro Gly Lys
260 465
263 <210> SEQ ID NO: 5
264 <211> LENGTH: 469
265 <212> TYPE: PRT
266 <213> ORGANISM: Artificial Sequence
268 <220> FEATURE:
269 <223> OTHER INFORMATION: Heavy chain of variant of 12.12 human anit-CD40
270   antibody
272 <400> SEQUENCE: 5
273 Met Glu Phe Gly Leu Ser Trp Val Phe Leu Val Ala Ile Leu Arg Gly
274 1   5   10   15
275 Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
276   20   25   30
277 Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
278   35   40   45
279 Ser Ser Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
280   50   55   60
281 Glu Trp Val Ala Val Ile Ser Tyr Glu Glu Ser Asn Arg Tyr His Ala
282 65   70   75   80
283 Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Ile

VERIFICATION SUMMARY   DATE: 05/15/2006
PATENT APPLICATION: **US/10/578,387**   TIME: 09:46:00

Input Set : **A:\seqlst.txt**
Output Set: **N:\CRF4\05152006\J578387.raw**

L:15 M:270 C: Current Application Number differs, Replaced Current Application No
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:40 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:43 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1
L:532 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:9
L:633 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:11